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AUTHOR Fifer, Beverley B.; And Others
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ABSTRACT

The Continuing Professional Education Inventory (CPEI) was field-tested with a group of 348 teachers throughout Tennessee who attended summer educational conferences at four different locations. The survey included 35 statements regarding barriers to continuing professional education which respondents rated on a Likert scale. Fifteen demographic items were also included. Six barriers were identified: (1) lack of fulfillment; (2) lack of support from school system; (3) second job; (4) personal time; (5) child care; and (6) inconvenience. Demographic variables helped to further define the barriers, which were then compared to factors identified by the results of similar studies in other fields. Recommendations regarding possible ways to reduce identified barriers are made for school administrators and others who organize continuing professional education activities. (JD)

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Identifying Barriers

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Identifying Barriers to Participation by Educators in Continuing Professional Education

Beverley B. Fifer
Wallace Elementary School
Washington County, Virginia

H. Fred Dobson
Baileyton Elementary School
Greene County, Tennessee

Stanley C. Kinnett
Daniel Boone High School
Washington County, Tennessee

Patton Gamble
University School
East Tennessee State University

Charles F. Smelcer
Mosheim Elementary School
Greene County, Tennessee

Cathy J. Horton
Rock Springs Elementary School
Sullivan County, Tennessee

Stephen A. Sorrell
University School
East Tennessee State University

W. Rigby Kind
Tennessee High School
Bristol, Tennessee

Nancy C. Wagner
Sullivan South High School
Sullivan County, Tennessee

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East Tennessee State University

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Abstract

The present reform in education, focusing on effective schools and teacher accountability, has seemingly ignored the obstacles to professional development facing educators. Research from other professions has provided some useful indicators; however, no study had been conducted specifically on the obstacles to continuing professional education for educators. Therefore, an instrument was developed by researchers as part of the East Tennessee State University Danforth Principal Training Program.

The Continuing Professional Education Inventory (CPEI) was field-tested with an intact group of teachers. The survey included thirty-five statements regarding barriers to continuing professional education which respondents rated on a Likert scale from "never interferes" to "always interferes". Fifteen demographic items were also included. Following appropriate revisions, the CPEI was administered to a cluster sampling of more than 350 teachers. Factor analysis was utilized to identify factors deterrent to participation in continuing professional education.

Six barriers were identified. Among these were "lack of fulfillment" and "lack of support from school systems." Demographic variables helped to further define the barriers, which were then compared to factors identified by the results of similar studies in other fields.

Recommendations regarding possible ways to reduce identified barriers were made for school administrators and others who organize continuing professional education activities.

Identifying Barriers to Participation by Educators in
Continuing Professional Education

Thorough identification of barriers to continuing professional education is needed to assess new approaches addressing individual adult learning needs, as well as addressing public perceptions of contemporary educational issues. Current educational reform, focusing on effective schools and teacher accountability, has neglected the obstacles to professional growth of educators. Formal undergraduate training to become a teacher is typically a four to five year process depending on mandates by individual states. This training process is only the beginning. J. Merrell Hansen (1980) stated that the hallmark of a true profession is one in which current information is disseminated and implemented by its members. Continuing professional education becomes a necessity for educators to remain current and to aid in the dynamics of societal and world change. Schools, according to Hansen, must reflect the ability to adapt and to improve. For an educator, a systematic, lifelong exposure to instructional methods and strategies is very important (Farnsworth, 1981). Continuing professional education is truly an investment in which dividends are appreciated, and involvement has the potential of making a profound difference in the effectiveness of the schools (Hansen, 1980).

Much research has been devoted to identifying learner styles and motivational factors in participation in continuing professional opportunities (e.g., Boshier, 1971; Burgess, 1971; Houle, 1961; Ordos, 1980); however, few studies have examined the deterrents to participation in continuing professional education. Initial research involving studies concerning deterrents targeted specific professions. The Deterrents to Participation Scale (DPS) (Scanlan & Darkenwald, 1984) studied participation by physical therapists, medical technologists, and respiratory therapists. A later study (Darkenwald & Valentine, 1985) attempted to address the constricted external validity: results could not be generalized to all health professionals, much less to the general public. Therefore, a new form of the DPS, the Deterrent Participation Scale-General (DPS-G), was developed for the general adult population. Darkenwald (1985) concluded that specially designed instruments may be necessary to measure adequately distinctive sub-populations.

Upon careful examination of the DPS and the DPS-G, it was determined that the measures could target deterrents to participation by educators; however, the instruments did not address deterrents or barriers unique to educational personnel. Researchers in the Danforth Program for Educational Leadership at East Tennessee State University determined that there was no instrument to assess barriers to continuing professional

education (CPE) for educators. Therefore, an education-specific instrument, the Continuing Professional Education Inventory (CPEI), was developed.

By recording and understanding the concepts of the barriers to participation in continuing professional education, practical tools, strategies, and procedures could then be developed to encourage participation, reduce barriers, and provide vital information for educators to remain current. School systems, conference planners, trainers, and institutions offering educational growth opportunities could become responsive to individuals served, enhancing teacher participation and learning to produce effectiveness in the classrooms.

Problem Statement

There was no existing instrument for determining barriers to participation in Continuing Professional Education for educators. The purpose of this study was to develop a valid and reliable instrument and to identify factors that deter participation in CPE for teachers. The following questions were addressed:

1. What are the major barriers to participation in CPE for teachers?
2. What is the relationship between variables such as gender, age, years of experience, and type of school district for each factor?

Literature Review

To understand the barriers to participation, a brief review was made of previous studies. Knox (1987) found evidence of the relation between socio-economic status and voluntary participation. Participation has also been influenced by personal and situational factors, which combined to create barriers (Boshier, 1973). Studies have also shown that educational attainment was more strongly related to participation than it was to occupation (Rubenson, 1985). Rubenson further noted that participation and interest in adult education are clearly related to age. Interest, as well as participation, begins to decline in the early thirties and drops sharply after the age of fifty; however, age is not independent but interacts with educational level. Therefore, the change in participation by age is most dramatic among those with lower levels of educational attainment. Women's participation has been comparable to that of men, except for work-related educational opportunities (Rubenson, 1985; Blais, Duquette, & Painchaud, 1989). Women's rate of participation is lower; however, their interest in continuing professional education is higher than that of men (Blais, Duquette, & Painchaud, 1989).

Burgess (1971) found that reasons given for participation by adults would cluster into groups; the clusters indicated a deeper influence than any number of single reasons. It was possible to

identify several general clusters, although they were diverse and complex. The basic clusters of reasons for participation as determined by Boshier (1982) were cognitive interest, social stimulation, social contact, external expectations, community service, and professional advancement. As participation clusters were identified, deterrent factors to participation were also isolated.

More research has been devoted to reasons for participation than to deterrents to participation. Early research targeted specific professions for identification of barrier clusters. The most commonly used assessment tools have been surveys and questionnaires for data collection.

The Deterrents to Participation Scale (Scanlan & Darkenwald, 1984) studied participation by physical therapists. Deterrents loaded into six distinct factors: (a) disengagement, which included boredom, uncertainty, apathy, and alienation; (b) lack of quality of the programs offered; (c) family constraints due to respondents' familial role and role expectations; (d) costs, which were part of the most influential reasons given by respondents; (e) lack of benefit; and (f) work constraints, which related to conflicting demands on respondents' work time or scheduling difficulties. As noted by Scanlan and Darkenwald, the study provided empirical evidence that deterrent factors can be identified and that the construct is multidimensional. The

factors contributed substantially to explaining the variance in participation behaviors. The study also had implications to the providers of continuing professional education because four of the six factors identified partially reflect on programming characteristics, which can be modified by the providers. These factors were cost, work constraints, and lack of benefit. The researchers stressed the importance of additional study; their research constituted a beginning step in a new phase of inquiry.

A later study (Darkenwald & Valentine, 1985) attempted to address the problem of limited external validity: results could not be generalized to all health professions, much less to the general public. Therefore, a new form of the Deterrents to Participation Scale (DPS) was developed for the general population. The Deterrents to Participation Scale-General (DPS-G) was distributed by mail to a large, heterogeneous sample of the general public. Attempts were made to determine relationships between the socio-demographic variables deterring participation. Six factors were selected as the conceptually most meaningful representation of the data. The factors were as follows: (a) lack of confidence, which conveyed self-doubt, diffidence, and low academic self-esteem; (b) lack of course relevance, not meeting the respondents' perceived needs and interests; (c) time constraints, (d) low personal priority, indicative of lack of motivation or interest; (e) cost; and

(f) personal problems, where four of the five items in the factor reflect situational difficulties related to child care, family problems, and health problems or handicaps. The six factors of the DPS-G represented the components of the deterrent construct. Darkenwald concluded, due to the differing results of this study compared with his research previously cited, that instruments should be specially developed to measure distinctive sub-groups in the general population. Darkenwald's studies have great applicability to the research of educators in instrument design, sampling methods, and, most importantly, the actual factors that impede participation.

A modified format of the DPS was used in a recent study (Blais, Duquette, & Painchaud, 1989) to examine participation in adult education by the nursing profession. The translated, revised version was necessary, due to unique characteristics of the sub-group of the population of francophone diploma nurses. Data collected revealed five conceptually interpretable clusters. The results indicated a similarity to previous studies; however, the differing instruments which were used negate a one-to-one correspondence of results. The clusters identified by this study were as follows: (a) incidental costs, the problem of schedule and location versus the costs involved in making arrangements; (b) low priority for work-related activities, being overwhelmed with what may appear as conflicting role demands leaving no time for involvement; (c) absence of external incentives;

(d) irrelevance of additional formal education for professional practice; and (e) lack of information and affective support. These clusters represent a deterrent construct for the sample surveyed, and demonstrate unique characteristics of the targeted population in terms of the variable used. Again, the deterrents illustrate that the providers of continuing professional education can have impact on participation with modifications in current offerings and practices. This study stressed the urgent need for methods of delivery of continuing professional education within the workplace. It should also be noted that this study may hold increasing importance since the respondents were women. The teaching profession, the population for this study, remains predominantly female.

The above studies form the framework for the construct of identifying deterrents or barriers to participation, quite useful for additional research. Knox (1987) developed a strategy for increasing participation based on the generalizations of facilitators and barriers to continuing professional education. These four broad approaches constitute a flexible strategy for reducing barriers and encouraging participation and achievement:

1. Summarize highlights about major participation facilitators and barriers for your specific clientele.
2. Assess reasons and deterrents for your specific clientele.

3. Help clientele understand what they can do about facilitators and barriers.

4. Show other organizations what they can do to encourage continuing professional education participation.

Methods

Instrumentation

The first step in the construction of the Continuing Professional Education Inventory (CPEI) was the development of 39 items addressing barriers to continuing professional education (CPE). CPE was defined as credit and non-credit classes, workshops, seminars, conferences, training programs, inservice activities, and any other organized learning activity. The respondents were instructed not to consider participation in graduate courses or programs as continued professional education. A Likert scale was used; possible responses ranged from "never interferes" to "always interferes". The survey also included fifteen demographic questions.

After construction was completed, the survey was field-tested with an intact group of teachers. In this process the teachers were asked to make comments concerning the clarity of the items. An analysis of respondents' comments resulted in the elimination of four items and the modification of several others. Content validity of the instrument was judged by a panel of

professors from East Tennessee State University, experts in the field of educational research, and interested graduate students familiar with instrument design.

Subjects

Following appropriate revisions, the CPEI was administered to teachers throughout Tennessee who attended summer educational conferences at four different locations. The researchers used a convenient cluster sample because of time constraints and accessibility. Since the respondents were employed by 42 different school systems of Tennessee, we believe that the sample was representative of Tennessee teachers.

Data were collected from responses by 348 teachers. Males composed 16.7% of the sample and 83.3% were female. Almost two thirds (62.9%) of the teachers were employed by county school systems (rural) and 36.5% were employed by city school systems (urban) with less than 1% not employed or privately employed.

Educational levels of respondents were as follows: 36.6% had a Bachelor of Science or Bachelor of Arts degree, 55.0% had a Master of Science Degree or Master of Arts Degree, 4% had an Educational Specialist Degree, .7% had a Doctorate Degree, and 5% had a Master of Education or Master of Arts in Teaching Degree.

Most of the respondents were married (75.3%), but 14.5% were single, 2.2% were widowed, and 8.0% were divorced.

Procedures

The teachers surveyed were participating in summer workshops and conferences at four different locations across the state. The collection of data occurred within a three week time period.

A factor analysis was then conducted to determine general categories of barriers to CPE. The t-test, ANOVA, and Scheffe' were used to determine relationship between demographic variables on each identified factor.

Results

An analysis of the data produced two distinct results. First, six barriers were identified through factor analysis. Second, relationships existed between certain demographic items and some of the identified barriers. The six barriers identified were as follows:

1. Lack of fulfillment
2. Lack of support from school system
3. Second job
4. Personal time
5. Child care
6. Inconvenience

The cutoff point for acceptable loading was .35, and all items possessed good simple structure.

Barrier 1: Lack of Fulfillment

There were eight items which loaded into this category. The commonalities for the eight items were personal satisfaction with the program and professional relevance. It was interesting to note that respondents perceived professional relevance and personal satisfaction as the same thing. The mean response for items in this category was between seldom interferes and sometimes interferes.

Table A
Barrier 1: Lack of Fulfillment

Item	Loading Value	Item Mean
Continuing professional education offerings are not relevant to my teaching assignments.	.45748	2.543
Program sponsors or presenters do not have good reputations.	.53767	1.997
Participation in continuing professional education opportunities is not professionally satisfying.	.72177	2.297
Continuing professional education opportunities in my locality are poorly planned.	.49419	2.668
Participation in continuing professional education is not personally satisfying.	.64416	2.093
Continuing professional education activities do not meet my unique professional development needs.	.68654	2.475
Continuing professional education offerings are not relevant to my subject area or discipline.	.67380	2.442
Presentations in continuing education are boring.	.60743	2.690

Barrier 2: Lack of Support from School System

Nine items loaded into this category. The items reflected the concern of teachers toward the systems' support in the areas of rewards, incentives and release time. The item with the strongest loading concerned monetary support. This factor was perceived as the second greatest deterrent to participation.

Table B

Barrier 2: Lack of Support from School System

Item	Loading Value	Item Mean
My school system does not provide incentives or rewards for participating in continuing professional education.	.73742	2.907
My school system does not provide release time (professional leave) for continuing professional education.	.47196	3.032
There is little encouragement from my peers for participation.	.41223	2.410
I do not have the opportunity to help plan continuing professional education programs.	.51361	2.730
My school system does not provide assistance and/or reimbursement for costs incurred with continuing professional education.	.70398	3.459
There are no monetary gains for participation in continuing professional education.	.64725	2.925
There is no recognition for participation in continuing profession education programs.	.58386	2.800
My school system does not encourage implementation of programs, ideas, and/or methods presented through continuing professional education.	.56441	2.530
My school system cannot financially support continuing professional education.	.43149	2.826

Barrier 3: Second Job

All six items in this category dealt with limitations due to a second job. One of the items did not directly mention a second job, but it did deal with limitations due to cost. The mean response for these items was approximately around 2.5, between "seldom interferes" and "sometimes interferes."

Table C
Barrier 3: Second Job

Item	Loading Value	Item Mean
A second job during the school year limits the time I have to participate in continuing professional education.	.70997	2.062
The cost of continuing professional education limits my participation.	.35786	3.257
Participating in continuing professional education limits the opportunities for income during the summer.	.82063	2.643
School responsibilities (coaching duties, sponsorship of clubs and organizations and/or committee assignments) limit my time for continuing professional education.	.39547	2.673
Participating in continuing professional education limits the opportunities for income during the school year.	.70103	2.303
A summer job limits the time I have to participate in continuing professional education.	.83174	2.256

Barrier 4: Personal Time

Seven items factored into this category. All items dealt with time constraints. The constraints ranged from family responsibilities to leisure time. Personal time was perceived as the greatest barrier to CPE.

Table D
Barrier 4: Personal Time

Item	Loading Value	Item Mean
Outside activities limit the time available to participate in continuing professional education.	.48284	3.178
The length of continuing professional education courses/training is too long.	.39528	2.823
I already attend too many meetings.	.66363	3.020
Other interests hold higher priorities than continuing professional education.	.60454	2.729
Continuing professional education interferes with time usually spent with my family.	.50176	3.343
After completing contracted duties, I do not have the energy or stamina to participate in continuing professional education.	.58245	3.170
Continuing professional education infringes upon my leisure time.	.63082	3.107

Barrier 5: Child Care

The items in this factor addressed child care arrangements and costs. The responses indicated that this was perceived as the lowest of the six barriers.

Table E
Barrier 5: Child Care

Item	Loading Value	Item Mean
The inability to arrange for child care limits participation.	.92729	2.172
Child care costs prohibit participation.	.88881	1.963

Barrier 6: Inconvenience

Three items loaded into this category. Two of the items dealt with travel limitations. The other addressed inconvenient scheduling. These items were moderate compared to the other five barriers.

Table F
Barrier 6: Inconvenience

Item	Loading Value	Item Mean
The distance to continuing professional education opportunities is prohibitive.	.72703	2.592
Continuing professional education opportunities are not scheduled at convenient times.	.56993	2.950
Travel costs prohibit participation in continuing professional education.	.51741	2.935

A t-test was used to compare differences between rural and urban districts as well as gender. Of the six identified barriers only one showed a significant difference ($\alpha < .01$) between rural and urban teachers. Table 1 shows that rural teachers perceived the "Lack of School System Support" a barrier more than did urban teachers.

Insert Table 1 about here

It is interesting to note a polarity existed between males and females on each of the six barriers. Considering the gender, three significant differences ($\alpha < .05$) occurred. Males perceived the barriers of "Lack of School System Support" less a barrier than females. The barriers of "Child Care" and "Inconvenience" were considered to be more inhibiting to participation in continuing professional education for females than for males.

Insert Table 2 about here

Another statistical procedure, the Analysis of Variance (ANOVA), was conducted to determine the differences among groups by age, years of experience, educational level, grade levels taught, and marital status. The results of the ANOVA revealed a significant difference ($\alpha < .001$) among grade levels taught on the "Second Job" barriers. A Scheffe' was then conducted which

showed significant differences between the K-5 and 6-8 levels.

Insert Table 3 about here

Results of the analysis on the educational level revealed that the perception of "Child Care" as a barrier by baccalaureate teachers was significantly different ($\alpha < .01$) from that of both MS/MA and post-MS/MA teachers. Scheffe' results indicated that teachers at the baccalaureate level perceived "Child Care" as a greater barrier than did graduate level.

Insert Table 4 about here

In the comparison of groups by marital status, a significant difference ($\alpha < .001$) was determined to exist with the barrier of "Child Care". Scheffe' results indicated this to be more of a barrier for married teachers than for single teachers.

Insert Table 5 about here

The ANOVA results on the main effect of age across all barriers of the study revealed no significant differences among the groups. Similarly no significant differences occurred among the years of experience groups.

Insert Table 6 about here

Insert Table 7 about here

Conclusions

The researchers reached several conclusions. Among these was the determination that the demographics used in the instrument provide information essential to the tailoring of a program for individual systems to increase participation in CPE.

Four general conclusions emerged from the study. First of all, the researchers determined that further research in the area of barriers to CPE for educators is necessary. The researchers also deduced that modifications of the instrument were needed, and that revisions in sampling techniques and data collection were imperative. Finally, the researchers determined that the use of an instrument was essential to the preparation and the presentation of a vital CPE program.

More specifically, the researchers reached six conclusions. A factor analysis yielded six general barriers to CPE for teachers. Also discovered was a significant difference in the perceptions between rural teachers and urban teachers. Perception differences also existed between teachers who taught different grade levels in relation to a possible second job. Child care was a significant concern for married teachers and for teachers with a bachelor's degree, but not as much for single teachers or for teachers with a master's degree or above. Unexpectedly, no significant difference occurred at any age level.

The most specific conclusion, and the one which intrigued the

researchers most, was the determination of a significant difference in the perceptions between males and females. The researchers strongly recommend further study in this area to provide information essential to the development of informative and interesting CPE programs.

Recommendations

The researchers recommend that school systems do the following:

1. Survey teachers to see what interests they have in Continuing Professional Education and provide programs that meet the needs of educators.
2. Give more input and support to their staffs for Continuing Professional Education.
3. Provide dynamic, motivating, enthusiastic, and well-trained presenters.
4. Provide release time, inservice credit, tenure credit, or any other financial support for Continuing Professional Education.
5. Provide child care.
6. Carefully consider the characteristics of the clientele when planning CPE programs.

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Table 1
Results of the main effect of type of school system across all barriers of the study

Variable (Barrier)	Rural		Urban		F
	M	SD	M	SD	
Lack of Fulfillment	.01	1.01	.01	1.01	.01
Lack of School System Support	.11	1.02	-.21	.93	8.76**
Second Job	.07	1.01	-.12	.99	2.71
Personal Time	.03	1.01	-.05	.99	.48
Child Care	-.01	.98	.05	1.04	.33
Inconvenience	.01	.96	.02	1.07	.01

**Significant at the .01 level

Table 2
Results on the main effect of gender across all barriers of the study

Variable (Barrier)	Male		Female		F
	M	SD	M	SD	
Lack of Fulfillment	.2	.78	-.05	1.03	3.12
Lack of School System Support	-.35	.82	.08	1.02	9.09**
Second Job	.19	.95	-.03	1.02	2.37
Personal Time	0	1.12	-.01	.98	.01
Child Care	-.31	.71	.06	1.04	6.64*
Inconvenience	-.24	1.06	.06	.99	4.4*

*Significant at the .05 level

**Significant at the .01 level

Table 3
Results on the main effect of grades taught across all barrier
of the study

Variable (Barrier)	Grades K-5		Grades 6-8		Grades 9-12		F
	M	SD	M	SD	M	SD	
Lack of Fulfillment	-.09	1.02	.05	1.02	.16	.88	1.58
Lack of School System Support	-.05	.95	-.08	.1	.24	1.11	2.36
Second Job	-.17	.94	.28	1.03	.18	1.09	7.21***
Personal Time	.01	.95	.1	1.13	-.11	1.01	.77
Child Care	.01	1.03	1.05	1.02	-.1	.91	.41
Inconvenience	.03	.95	-.07	1.08	.17	1.04	1

***Significant at the .001 level

Table 4
Results on the main effect of level of education across all
barriers of the study

Variable (Barrier)	BS/BA		MS/MA		Post MS/MA		F
	M	SD	M	SD	M	SD	
Lack of Fulfillment	-.01	.99	.02	1.02	.02	.97	.04
Lack of School System Support	-.12	.96	.05	.1	.36	1.26	2.19
Second Job	.02	1.02	-.02	.99	.12	.97	.19
Personal Time	.04	1.01	-.01	.98	-.26	1.24	.64
Child Care	.2	1.07	-.07	.95	-.55	.65	5.78**
Inconvenience	.04	.93	.03	1.02	-.19	1.19	.4

**Significant at the .01 level

Table 5
Results on the main effect of marital status across all barriers of the study

Variable (Barrier)	Single		Married		Widowed		Divorced		F
	M	SD	M	SD	M	SD	M	SD	
Lack of Fulfillment	.08	.91	.04	1.01	-.41	.1	-.3	1.06	1.53
Lack of School System Support	-.25	.1	.01	.99	.35	1.07	.28	.99	2.15
Second Job	.19	1.02	-.08	.96	.5	.97	.17	1.19	2.18
Personal Time	.22	1.12	-.05	.1	.4	.78	-.06	.8	1.56
Child Care	-.57	.78	.11	.99	-.11	1	.03	1.15	7.03***
Inconvenience	.09	1.07	-.03	.98	-.31	.77	.14	1.11	.64

***Significant at the .001 level

Table 6
Results on the main effect of age across all barriers of the study

Variable (Barrier)	20-25		26-35		36-45		46-55		56+		F
	M	SD	M	SD	M	SD	M	SD	M	SD	
Lack of Fulfillment	.15	1.02	-.06	.98	0	1.02	.06	.97	-.27	.91	.47
Lack of School System Support	-.48	1.14	-.09	.91	.11	.98	-.1	1.11	.3	1.15	1.83
Second Job	.15	1.04	.14	1.01	-.04	1.04	-1.09	.94	.05	.99	.7
Personal Time	.29	1.24	-.16	1	.11	.97	-.14	1.09	-.11	.72	1.68
Child Care	-.32	1.07	.11	1.09	.08	.1	-.2	.84	-.3	1.08	1.94
Inconvenience	.07	1.01	.05	1.01	.06	.96	-.12	1.11	-.23	.94	.64

Table 7

Results on the main effect of years of experience across all barriers of the study

Variable (Barrier)	0-3		4-7		5-12		13-17		18+		F
	M	SD	M	SD	M	SD	M	SD	M	SD	
Lack of Fulfillment	-.02	1.05	-.03	.94	.04	1.06	.02	.9	0	1.07	.04
Lack of School System Support	-.43	1.08	-.09	.85	-.01	.94	.13	1.04	-.02	1.01	1.5
Second Job	-.15	.86	.16	.91	.09	1.08	-.07	1.04	.15	.94	1.21
Personal Time	-.2	1.14	-.15	.87	0	.1	.14	.95	-.07	1.06	1.08
Child Care	-.16	.95	.03	.88	.16	1.15	0	.95	-.1	.97	.91
Inconvenience	-.05	.97	.1	.88	.09	.94	.15	.95	-.23	1.11	2.35

No statistically significant differences occurred between years of experience.